

NEW TAXA AND NEW COMBINATIONS OF THELYPTERIS FROM GUATEMALA

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Prior to publication of a treatment of Thelypteris as part of the Ferns and Fern Allies of Guatemala (in Fieldiana:Botany), it is necessary to describe two new taxa and make several new combinations.

THELYPTERIS STOLZEANA A. R. Smith, sp. nov.

Rhizomata erecta, caudicibus ca. 1.0-1.5 cm. diametro; stipites fasciculati, 10-20 cm. longi, 1-2 mm. diametro, brunneoli, pilis stipitatis bifidis vel trifidis ca. 0.1 (0.2) mm. longis, necnon pilis paucis simplicibus, glabrescentes; laminae atrogriseo-virides, 15-25 cm. longae bipinnatifidae, ad apicem confluentem pinnatisectum gradatim reductae; rhachides sine gemmis; pinnae 8-9-jugae, sessiles, infimae (1-2 paria) leviter reductae deflexaeque, basi angustatae; pinnae maximae usque ad ca. 5 cm. longae, 1.5 cm. latae, incisae ca. 0.5-0.7, lobatae basi; segmenta subobliqua, non vel obscure falcata, 2-3 mm. lata, ad apicem rotundata vel truncata; venae 4-6-jugae, infimae duae marginem ad sinum attingentes, vel vena distali parvis marginem intra 0.3 mm. sinus attingenti; rhachides costaeque infra pilis 2-4-fissis (paucis simplicibus), stipitatis, 0.1 (0.2) mm. longis; venae infra pilis simplicibus; paginae laminarum firmo-herbaceae, utrinque glabrae, non verrucosae; sori infra-mediales vel mediales, exindusiati; sporangia glabra.

Type: GUATEMALA, Dept. Alta Verapaz, along Río Carchá between Cobán and San Pedro Carchá, Standley 90107 (holotype F).

Paratype: MEXICO, Est. Chiapas, municipio La Trinitaria, Lagos de Montebello, Montane Rain Forest, Pine-Oak-Liquidambar forest, 1300 m., Breedlove 22355, with Smith (DS).

This species forms a probable evolutionary link between typical members of subg. Goniopteris, such as T. hatchii A. R. Smith, and T. blanda (Fée) Reed, thought by Christensen (1913) to belong to subg. Lastrea. Thelypteris blanda, the closest known relative of T. stolzeana has a few minute furcate hairs on the rachis (overlooked by Christensen) while T. stolzeana has much more obvious furcate to stellate hairs on the rachis and costae below. In addition, the two can be distinguished by the deeper cutting of the pinnae in T. blanda, the lowermost veins thus meeting the blade margin well above the sinus. Both species, along with T. hatchii and several other species of subg. Goniopteris, have a distinctive dark grayish-green blade color.

The floras of Alta Verapaz, Guatemala, and Lagos de Monte Bello, Chiapas, have much in common, both areas having a limestone substrate. Several species of ferns are known only from these two areas, e.g., Asplenium olivaceum A. R. Smith and Ctenitis lanceolata (Baker) A. R. Sm both apparently calcicolous.

The species epithet honors Mr. Robert G. Stolze, Field Museum of Natural History, who is preparing a floristic account of the pteridophytes of Guatemala.

THELYPTERIS MENISCIOIDES (Liebm.) Reed var. TERNATA A. R. Smith, var. nov.

Differt a var. meniscioides laminis plerumque ternatis 1 (3) paribus pinnarum lateralium, et sporangiis setosis pilis 0.1 mm. longis.

Type: GUATEMALA, Dept. Izabal, along Río Frío, "on rock", Steysmark 41644 (holotype F; isotypes GH, US).

Paratypes: GUATEMALA. Dept. Alta Verapaz, near Chirriacté on Petén Hwy., ca. 900 m., Standley 91861 (F); same locality, Standley 91624 (F). Dept. Izabal. Jocoló, Johnson 1125 (LA, US); between Escobas and Montaña Escobas, across bay from Puerto Barrios, 1-100 m., Steysmark 39294 (F).

Variety ternata is thus far known only from wet limestone forests of Guatemala, where it seems to be more common than the type variety, known from Oaxaca, Chiapas, Veracruz, Tabasco, and Guatemala. One collection (Steysmark 39294) has one frond with 2-1/2 pairs of lateral pinnae; all other collections have ternate fronds.

THELYPTERIS (subg. Goniopteris) MINOR (C. Chr.) A. R. Smith, comb. and stat. nov.

Basionym: Dryopteris nicaraguensis (Fourn.) C. Chr. var. minor C. Chr., Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh., VII. 10: 252. 1913. -Lectotype (chosen here): Guatemala, Alta Verapaz, Secanquim, Maxon & Hay 3196 (US!).

This species is known only from Guatemala. It seems closer to T. imbricata (Liebm.) Reed than to T. nicaraguensis, to which Christensen referred it. Thelypteris minor differs from the latter in the stalked (1-3 mm.) pinnae, the more abruptly reduced pinnae segments at the base of the lower pinnae, and in the darker gray-green color of the blades. True T. nicaraguensis is not known from Guatemala.

Specimens seen: GUATEMALA. Dept. Alta Verapaz. Near Finca Sepacuite, rd. from Secanquim to Sepacuite, Cook & Griggs 372 (US); Seból, near Rubelquiche, Contreras 4250 (US); vicinity of Secanquim, Maxon & Hay 3217 (US); Salvin s.n. (GH); Cubilquitz, v. Turckheim s.n. (Donnell Smith, ed. 8646) (GH, US). Dept. Chiquimula. Vicinity of El Barriol, Steysmark 30825 (F). Dept. Izabal. 2-5 km. S of Izabal, Jones et al. 3075 (F, NY); Jocoló, Johnson 1041 (NY, US); vicinity of Escoba, Standley 24821 (US), 24881 (GH, US); La Jagua to Murcielago, Rowland et al. B-36 (F); between Bananera and "La Presa", Steysmark 38262 (F). Dept. Petén. Along Río Machaquila, N of El Cambio, Steysmark 45958 (F, US).

THELYPTERIS (subg. Goniopteris) PRAETERMISSA (Maxon) A. R. Smith, comb. nov.

Basionym: Dryopteris praetermissa Maxon, Proc. Biol. Soc. Wash. 57: 20. 1944.

THELYPTERIS (subg. Goniopteris) SCHIPPPII (Weatherby) A. R. Smith, comb. nov.

Basionym: Dryopteris schippii Weatherby, Amer. Fern J. 25: 52. 1935

THELYPTERIS (subg. Amauropelta) CINEREA (Sodi-ro) A. R. Smith, comb. nov.

Basionym: Nephrodium cinereum Sodi-ro, Anales Univ. Centr. Ecuador 22: 103. 1908. Synonyms: Dryopteris sanctiformis C. Chr., Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh., VII. 10: 130. 1913. Thelypteris sanctiformis (C. Chr.) Reed, Phytologia 17: 312. 1968.

The type of Nephrodium cinereum is from Ecuador, Corazon, 8/903, Sodi-ro s.n. I have been unable to find type material at either K or P, but authentic and topotypic specimens agreeing with the original description are at P! (collected 12/907). These specimens show that N. cinereum is exactly the same as Thelypteris sanctiformis, known from southern Mexico to Ecuador.

THELYPTERIS (subg. Steiopteris) GLANDULOSA (Desv.) Proctor var. BRACHYODUS (Kunze) A. R. Smith, comb. and stat. nov.

Basionym: Polypodium brachyodus Kunze, Linnaea 9: 48. 1834. Synonym: Thelypteris brachyodus (Kunze) Ching, Bull. Fan Mem. Inst. Biol., Bot. 6: 286. 1936.

The type variety is confined to the Lesser Antilles and northern South America and differs slightly by its lighter green blades above, more falcate segments, and generally opposite pinnae. These differences are insufficient for recognition of T. brachyodus as a distinct species.

THELYPTERIS subg. MACROTHELYPTERIS (H. Ito) A. R. Smith, comb. and stat. nov.

Basionym: Thelypteris sect. Macrothelypteris H. Ito in Nakai and Honda, Nov. Fl. Jap. no. 4. 141. 1939. Macrothelypteris (H. Ito) Ching, Acta Phytotax. Sin. 8: 308. 1963.

For the purposes of a flora, I choose to recognize a broadly circumscribed genus Thelypteris with numerous well-defined subgenera. No name has heretofore been available at subgeneric rank for the naturalized Old World species Thelypteris torresiana (Gaud.) Alston.

#### Literature cited

- Christensen, C. 1913. A monograph of the genus Dryopteris. Part I. The tropical American pinnatifid-bipinnatifid species. Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh., VII. 10: 55-282.